

I claim:

1. A golf ball layer comprising:
  - (a) a triblock copolymer having
    - (i) a first polymer block comprising an aromatic vinyl compound,
    - (ii) a second polymer block comprising a diene compound, and
    - (iii) a hydroxyl group located at a block copolymer,or a hydrogenation product of the triblock copolymer, or mixtures thereof;
  - (b) a base polymer; and
  - (c) a polymeric modifier consisting of
    - (i) an impact modifier, or
    - (ii) a functionalized polymer, the functionalized polymer consisting of a copolymer or a terpolymer having a glycidyl group, hydroxyl group, maleic anhydride group, or carboxylic group, or
    - (iii) mixtures of the impact modifier and the functionalized polymer.
2. A golf ball layer as defined in claim 1, wherein the layer is a cover layer.
3. A golf ball layer as defined in claim 1, wherein the layer is an intermediate layer situated between a core and a cover layer.

4. A golf ball layer as defined in claim 1, wherein the base polymer comprises an ionomeric polymer comprising copolymeric polymers, terpolymeric polymers, or mixtures thereof.
5. A golf ball layer as defined in claim 1, wherein the base polymer comprises a non-ionomeric polymer.
6. A golf ball layer as defined in claim 1, wherein the ratio by weight of triblock copolymer to base polymer ranges between about 10:90 and about 90:10.
7. A golf ball layer as defined in claim 6, wherein the ratio by weight of triblock copolymer to base polymer ranges between about 10:90 and about 70:30.
8. A golf ball layer as defined in claim 7, wherein the ratio by weight of triblock copolymer to base polymer ranges between about 10:90 and about 60:40.
9. A golf ball layer as defined in claim 1, wherein the layer comprises impact modifier in an amount between about 0.1 and about 15 parts per hundred by weight of the total amount of triblock copolymer and base polymer.
10. A golf ball layer as defined in claim 9, wherein the layer comprises impact modifier in an amount between about 1 and about 10 parts per hundred by weight of the total amount of triblock copolymer and base polymer.

11. A golf ball layer as defined in claim 1, wherein the impact modifier is selected from the group consisting of acrylic impact modifier, ethylene vinyl acetate, polyaryl ether, acrylonitrile-butadiene-styrene, methacrylate-butadiene-styrene and, chlorinated polyethylene, or mixtures thereof.

12. A golf ball layer as defined in claim 11, wherein the acrylic impact modifier is selected from the group consisting of methyl methacrylate butylacrylate styrene, methyl methacrylate ethyl hexylacrylate styrene, or mixtures thereof.

13. A golf ball layer as defined in claim 1, wherein the layer comprises functionalized polymer in an amount between about 0.1 and about 15 parts per hundred by weight of the total amount of triblock copolymer and base polymer.

14. A golf ball layer as defined in claim 13, wherein the layer comprises functionalized polymer in an amount between about 1 and about 10 parts per hundred by weight of the total amount of triblock copolymer and base polymer.

15. A golf ball layer as defined in claim 1, wherein the layer comprises polymeric modifier in an amount less than about 20 parts per hundred by weight of the total amount of triblock copolymer and base polymer.

16. A golf ball layer as defined in claim 15, wherein the layer comprises polymeric modifier in an amount less than about 15 parts per hundred by weight of the total amount of triblock copolymer and base polymer.

17. A golf ball layer as defined in claim 1, further comprising UV stabilizers, photostabilizers, photoinitiators, co-initiators, antioxidants, colorants, dispersants, mold releasing agents, processing aids, inorganic fillers, organic fillers, or mixtures thereof.

18. A method for making a golf ball layer, comprising:  
preparing a composition comprising:

(a) a triblock copolymer having

(i) a first polymer block comprising an aromatic vinyl compound,

(ii) a second polymer block comprising a diene compound, and

(iii) a hydroxyl group located at a block copolymer,

or a hydrogenation product of the triblock copolymer, or mixtures thereof;

(b) a base polymer; and

(c) a polymeric modifier consisting of

(i) an impact modifier, or

(ii) a functionalized polymer, the functionalized polymer consisting of a copolymer or a terpolymer having a glycidyl group, hydroxyl group, maleic anhydride group, or carboxylic group, or

(iii) mixtures of the impact modifier and the functionalized

polymer; and

incorporating the composition into the golf ball layer.

19. A method as defined in claim 18, wherein the step of preparing a composition comprises a step of dry-blending the composition.

20. A method as defined in claim 18, wherein the step of preparing a composition comprises a step of mixing the composition using a mill, internal mixer or extruder.

21. A method as defined in claim 20, wherein the step of mixing the composition comprises melting the composition.

22. A method as defined in claim 18, wherein the step of preparing a composition comprises:

preparing a concentrate comprising the triblock copolymer, a hydrogenation product of the triblock copolymer, or mixtures thereof, the polymeric modifier and the base polymer;

preparing a preliminary composition comprising the triblock copolymer, or a hydrogenation product of the triblock copolymer, or mixtures thereof and the base polymer; and

adding the concentrate to the preliminary composition.